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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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HEWLETT-PACKARD COMPANY  
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EXAMINER
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TARAE, CATHERINE MICHELLE

ART UNIT	PAPER NUMBER
3623	

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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/976,959	<b>Applicant(s)</b> CHEN ET AL.	
	<b>Examiner</b> C. Michelle Tarae	<b>Art Unit</b> 3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. The following is a Non-Final Office Action in response to the communication received on April 20, 2006. Claims 1, 4, 6-9, 16 and 19 have been amended. Claims 1-20 are now pending in this application.

#### ***Response to Amendment***

2. Applicant's amendments to claims 1, 4, 6-9, 16 and 19 are acknowledged.

The amendments to claims 6-8 are sufficient to overcome the claim objection set forth in the previous Office Action; therefore the previous claim objections of claims 6-8 are withdrawn.

The amendments to claims 1, 4, 8 and 9 are also sufficient to overcome the 35 USC 112, second paragraph rejection set forth in the previous Office Action; therefore, the previous 35 USC 112, second paragraph rejection of claims 1, 4, 8 and 9 is withdrawn.

#### ***Response to Arguments***

3. Applicant's Remarks regarding Figure 4 being described in the specification has been considered and is found persuasive. The drawing objection set forth in the previous Office Action is withdrawn.

Applicant's arguments regarding the claim objections of claims 1 and 9 have been fully considered, but are found unpersuasive. In response to the claim objections, Applicant merely asserts that one of ordinary skill in the art at the time of the invention

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would understand that the elements of claims 1 and 9 *could* be used for forecasting.

However, that one of ordinary skill in the art would understand that claim elements *could* be applied to a particular field of use is not the correct test as the claim elements in the bodies of the claims do not positively recite any type of forecasting, which is what the preambles of the claims assert that the claims are doing. The elements of claims 1 and 9 recite performing some type of query process, which may or may not be related to the information market being run; aggregating the results of the query process, the actual query being unknown; and then making some type of adjustments for participant characteristics, the adjustments being unknown. Accordingly, as claims 1 and 9 are currently recited, it would not be understood by one of ordinary skill in the art at the time of the invention how the elements of claims 1 and 9 perform a forecasting process. Therefore, the claim objections of claims 1 and 9 are maintained. In addition, upon further review of the independent claims, they are deemed to lack statutory subject matter and indefiniteness. The analyses for the 35 USC 101 and 112, second paragraph rejections for claims 1-20 are provided below.

Applicant's arguments regarding the newly added limitations of an artificial market in which financial instruments are utilized, wherein said financial instruments are tradable by participants in said information market, are moot in view of the new rejections provided below.

***Claim Objections***

4. Claims 1 and 9 are objected to because of the following informalities:

The body of the claims does not appear to perform the intended use recited in the preamble (as per claim 1) or the instructions (per claim 9), which is forecasting.

Appropriate correction is required.

Claims 1 and 9 recite that the financial instruments are *tradable*, but since this is not positively recited, the financial instruments do not necessarily have to be traded. If the financial instruments are actually traded by the participants for the claim to come to fruition, then appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In independent claims 1 and 9, it is not readily apparent how the query process is related to the information market, as there is no recitation indicating that the query process is performed during the running of the information market or in connection with the running of the market information. It is also not readily apparent what the adjustments are that are made while aggregating results of the query process or what the adjustments are for or why they are made.

Likewise, in independent claim 16, it is not readily apparent how the developing a new predictive aggregation formula with adjustments for personal characteristics relates to the implementing an experimental information marketing. It is also not readily apparent what the different aggregation mechanisms are and why they are compared to a benchmark.

In claim 8, is recited, a potential outcome assigned by a participant. However, it is not clear what event or action the outcome is being assigned to as claim 1, from which claim 8 depends, mentions nothing about assigning outcomes to anything. Claim 1 recites an artificial market in which financial instruments are tradable by participants, but it is not clear what assigning an outcome has to do with trading financial instruments.

In claim 11, is recited, establishing a mechanism for permitting participants to indicate their predictions. It is not clear what the participants are predicting, as claim 9, from which claim 11 depends, mentions nothing about receiving predictions for anything. Claim 9 recites an artificial market in which financial instruments are tradable by participants, but it is not clear what making predictions has to do with trading financial instruments.

***Claim Rejections - 35 USC § 101***

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claims 1-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. According to MPEP 2106, the claimed invention as a whole must produce a “useful, concrete and tangible” result to have a practical application in order to be considered statutory.

Independent claims 1 and 16 are considered not tangible as they do not provide a “real world” result to a user. For example, they do not actually display or provide to a user the results or the aggregated results of the query process (per claim 1) or the results of the benchmark comparisons (per claim 16). As the claims are currently recited, the results of the query or the benchmark comparisons are never applied to a “real world” result that would make them tangible. On the contrary, it is not clear from the claims what occurs with the results of the query after they are aggregated or with the benchmark comparisons after they are made. Accordingly claims 1 and 16 are considered not tangible.

Claims 1, 9 and 16 also fail the useful test. The elements of claims 1 and 9 recite performing some type of query process, which may or may not be related to the information market being run; aggregating the results of the query process, the actual query being unknown; and making some type of adjustments for participant characteristics, the adjustments being unknown. Since some of the steps appear to not be linked to each other and are not specific, they also do not appear to be substantial or

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credible, thus failing the utility test (see MPEP 2107). Additionally, these steps do not appear to perform any type of forecasting as recited in the preambles, thus, questioning the usefulness of the steps in terms of supporting a forecasting process. Likewise, the elements of claim 16 do not appear to be linked as they recite developing a new predictive aggregation formula with adjustments for personal characteristics without any disclosed relevance to the implementing an experimental information marketing or any disclosed relationship to the different aggregation mechanisms and why they are compared to a benchmark. Finally, there is no recitation as to how the benchmark comparisons are used or applied.

Accordingly claims 1, 9 and 16 are considered not useful.

### ***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Jennings et al. (U.S. 6,606,615).

As per claim 1, Jennings et al. discloses a forecasting process comprising:



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running an information market, including an artificial market in which financial instruments are utilized, wherein said financial instruments are tradable by participants in said information market (col. 17, lines 23-28, 46-51 and 58-64; col. 18; col. 19, lines 21-26; Prediction contests are disclosed in which participants predict the values of financial instruments in an artificial market, where the financial instruments are tradable by the participants in "real life." For example, participants may predict the price of a particular stock and/or manage a mutual fund. Prediction challenges include a stock market challenge and a commodity challenge.);

extracting participant characteristics (col. 17, lines 19-40; Participant characteristics are gathered when they register with the system.);

performing a query process (col. 17, lines 52-64; col. 19, lines 3-21; The system receives participants predictions on various variables, thereby querying them for their predictions.);

aggregating results of said query process with adjustments for participant characteristics (col. 20, lines 44-65; Participants and their predictions may be divided into groups based on participants' characteristics.).

As per claim 2, Jennings et al. discloses a forecasting process of claim 1 wherein said information market is designed to elicit characteristics of participants (col. 21, lines 42-43; Some surveys are used to elicit personal preferences of the participants.).

As per claim 3, Jennings et al. discloses a forecasting process of claim 2 wherein said characteristics include participant risk inclination (col. 17, lines 23-29; Participant

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characteristics include dollar value of the investment portfolio, trading frequency and trading behavior, all of which imply risk inclination.).

As per claim 4, Jennings et al. discloses a forecasting process of claim 2 wherein said characteristics include participants ability to analyze information provided in said information market (col. 17, lines 41-51; col. 22, lines 16-43; The system maintains the track records of, for example, mutual fund manager participants. The track records indicate the participant's ability to analyze information in an information market. Also, participants are ranked based on their performance.).

As per claim 5, Jennings et al. discloses a forecasting process of claim 2 further comprising correlating observed behavior to accepted characteristic tendencies (col. 23, lines 22-59; Participants are placed into percentile rankings by correlating their behavior to accepted characteristic tendencies.).

As per claim 6, Jennings et al. discloses a forecasting process of claim 2 wherein said information market includes an artificial market financial instrument corresponding to a real world state (col. 17, lines 23-28, 46-51 and 58-64; col. 18; col. 19, lines 21-26; Prediction contests are disclosed in which participants trade financial instruments in an artificial market. For example, participants may predict the price of a particular stock and/or manage a mutual fund. Prediction challenges include a stock market challenge and a commodity challenge.).

As per claim 7, Jennings et al. discloses a forecasting process of claim 1 wherein the results of the query process are aggregated by revising apriori probabilities with reports provided by participants and conditioning the reports by the characteristics of

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the participants (col. 53, lines 30-40; Apriori probabilities are revised to aggregate the predictions.).

As per claim 8, Jennings et al. discloses a forecasting process of claim 1 wherein the results of the query process are aggregated by utilizing Bayes formula with each probability of the potential outcome assigned by a participant modified by an exponential factor to condition the probability for adjustments associated with each participant's characteristics (col. 53, lines 30-40; The aggregation uses Bayesian estimators.).

Claims 9-20 recite substantially similar subject matter to claims 1-8 above. Therefore, claims 9-20 are rejected on the same basis as claims 1-8 above.

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Keiser et al. (U.S. 6,505,174) discusses a computer-implemented securities trading system;
- Philips et al. (U.S. 6,473,084) discusses a prediction input system; and
- Archived version of [www.fantasystockmarket.com](http://www.fantasystockmarket.com), March 2000, discloses a prediction gaming system for trading stocks in a fake stock market.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. Michelle Tarae (formerly, C. Michelle Colon) whose telephone number is 571-272-6727. The examiner can normally be reached Monday – Friday from 8:30am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz, can be reached at 571-272-6729.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



C. Michelle Tarae  
Patent Examiner  
Art Unit 3623

July 6, 2006